To: Whittle, Caitlyn[Whittle.Caitlyn@epa.gov]

From: Liebman, Matt

Sent: Mon 10/31/2016 6:25:22 PM
Subject: RE: The State of Our Watershed

Review of 2016 State of our Watershed Report ocean and coastal acidification mliebman 10 31 16.docx

Ocean and coastal acidification review. Enjoy!

Matthew Liebman

US EPA New England - Region 1

5 Post Office Square, Suite 100

Mail Code OEP06-1

Boston, MA 02109-3912

#### liebman.matt@epa.gov

tel: 617-918-1626

cell: 508-517-1717

fax: 617-918-0626

From: Whittle, Caitlyn

Sent: Friday, October 28, 2016 12:38 PM
To: Liebman, Matt < Liebman.Matt@epa.gov > Subject: RE: The State of Our Watershed

Thanks, Matt. Please share these overall comments with your other thoughts. Don't feel the need to re-write the whole thing – they have hired a writer (for the second time) to try to fix the grammar and weird syntax.

Thanks! caitlyn \*\*\*\*\*\*\*\*\*\* Caitlyn Whittle U.S. EPA Region 1 5 Post Office Square, Suite 100 (OEP06-1) Boston, MA 02109-3912 phone: (617) 918-1748 fax: (617) 918-0748 whittle.caitlyn@epa.gov Paper is a valuable resource; please don't print this page unless necessary.

From: Liebman, Matt

**Sent:** Friday, October 28, 2016 11:55 AM

To: Whittle, Caitlyn < Whittle. Caitlyn@epa.gov >

Subject: RE: The State of Our Watershed

Still doing the review, the nutrient loadings section is very long. I am half way through. I am jealous that the NBEP had the time to write such a detailed assessment of all these indicators but it makes me wonder about the target audience.

My overall assessment is that because of its length it gets into too much detail the writing is sometimes awkward and confusing, and basically steps on itself. But, there is a tremendous

amount of information in there. I am wondering if some of it is included in other sections, so there may be some redundancy there.

I'll get you a finished product on Monday.

Matthew Liebman

US EPA New England - Region 1

5 Post Office Square, Suite 100

Mail Code OEP06-1

Boston, MA 02109-3912

#### liebman.matt@epa.gov

tel: 617-918-1626

cell: 508-517-1717

fax: 617-918-0626

From: Whittle, Caitlyn

Sent: Wednesday, October 19, 2016 1:40 PM

To: Liebman, Matt < Liebman.Matt@epa.gov >; Colarusso, Phil < colarusso.phil@epa.gov >; Guza-Pabst, Olga < Guza-Pabst. Olga@epa.gov >; Nelson, Eric < nelson.ericp@epa.gov >; LeClair, Jacqueline <<u>Leclair.Jackie@epa.gov</u>>; Mlsna, Ivy <<u>Mlsna.Ivy@epa.gov</u>>; Pryor, Margherita <Pryor.Margherita@epa.gov>; Stover, Toby <Stover.Toby@epa.gov>

Cc: Lyons, Regina <Lyons.Regina@epa.gov>; Cote, Mel <Cote.Mel@epa.gov>

Subject: RE: The State of Our Watershed

Hi everybody,

Just a reminder! There is still time to review the NBEP Status & Trends. Please be sure to send comments by Oct 28. Thanks! caitlyn \*\*\*\*\*\*\*\*\*\*\*\* Caitlyn Whittle U.S. EPA Region 1 5 Post Office Square, Suite 100 (OEP06-1) Boston, MA 02109-3912 phone: (617) 918-1748 fax: (617) 918-0748 whittle.caitlyn@epa.gov Paper is a valuable resource; please don't print this page unless necessary. From: Whittle, Caitlyn Sent: Thursday, September 15, 2016 1:58 PM To: Liebman, Matt < Liebman.Matt@epa.gov >; Colarusso, Phil < colarusso.phil@epa.gov >; Guza-Pabst, Olga <Guza-Pabst.Olga@epa.gov>; Nelson, Eric <nelson.ericp@epa.gov>; LeClair,

Jacqueline <<u>Leclair.Jackie@epa.gov</u>>; Mlsna, Ivy <<u>Mlsna.Ivy@epa.gov</u>>; Margherita Pryor

<Pryor.Margherita@epa.gov>; Stover, Toby <stover.toby@epa.gov>

Cc: Lyons, Regina < Lyons. Regina@epa.gov >; Mel Cote < Cote. Mel@epa.gov >

## Subject: FW: The State of Our Watershed

Hi all,

You should have just received an invitation from me to access the NBEP Status & Trends on our One Drive site. Below you'll find information about the files posted (ignore the FTP instructions and use the One Drive. We couldn't get the FTP to work at EPA). There are two documents – a State of the Watershed public report and a State of the Watershed Technical Report. One is an 80 page overview document and the other is a 360 page in-depth document. If you only have time to review the overview document, please let me know – that is probably sufficient, but if you have interest and time, feel free to dig into the technical reports. We are looking for showstopper, high level comments only on the particular chapters listed below, we would appreciate the feedback. Some have more chapters than others, so please feel free to let me know if there are other people who might be helpful with certain chapters. Regina and I came up with this list, and it's possible we can ask more people within EPA to review. From what I'm told there has also been extensive review performed by AED. Also, if this is too burdensome, please speak with your manager and hopefully we can help mitigate the workload. Review is due by October 28 – a whole month longer than we originally anticipated. Thank you in advance for your help on this!

### Chapters:

- 1. Water Clarity Matt
- 2. Seagrasses of NB Phil
- 3. Soft Sediment Benthic Habitat Quality Olga/Eric
- 4. Salt Marshes Jackie (maybe Ed?)
- 5. Water and Air temp Ivy/Matt
- 6. Emerging Contaminants Matt/Margherita
- 7. DO Concentrations Matt
- 8. Nutrient Loading Matt
- 9. Legacy Contamination Olga

10.	Fish Assemblages – Eric
11.	Chlorophyll Concentrations – Matt/Phil/Eric
12.	Fish Communities and Bio Indicators of Climate Change – Matt/Eric
13.	Sidebar: Ocean and Coastal Acidification – Matt/Ivy
14.	Precipitation – Ivy
15.	Sea Levels – Ivy
16.	Protected and Unprotected Open Space – Caitlyn
17.	Sidebar: Historical Change in Estuary Condition – Margherita
18.	Beach WQ - Caitlyn
19.	Stream Invertebrates – Toby
20.	WQ of Fresh and Salt Waters – Toby
21.	Shellfish Growing Areas – Phil/Eric
22.	Physical and Demographic Characteristics – ?
Thanks!	
caitlyn	
************	
Caitlyn Whittle	
U.S. EPA Region 1	
5 Post Office Square, Suite 100 (OEP06-1)	
Boston, MA 02109-3912	

phone: (617) 918-1748

fax: (617) 918-0748

whittle.caitlyn@epa.gov

Paper is a valuable resource; please don't print this page unless necessary.

From: Thomas Borden [mailto:Tom.Borden@nbep.org]

Sent: Friday, September 02, 2016 3:27 PM

To: Judith Swift (jswift@uri.edu) <jswift@uri.edu>; John W King <jwking@mail.uri.edu>; Sue

Kiernan < sue.kiernan@dem.ri.gov >; 'James Boyd (jboyd@crmc.ri.gov)' < jboyd@crmc.ri.gov >;

'Eric Boettger (eric.boettger@ri.usda.gov)' <eric.boettger@ri.usda.gov>; Joe Callahan

<jcallahan@esm-inc.com>; 'Peter Coffin (peter.coffin@zaptheblackstone.org)'

<peter.coffin@zaptheblackstone.org>; 'Walt Galloway' <whgalloway@verizon.net>; 'David W.

Gregg Ph. D. (dgregg@rinhs.org)' <dgregg@rinhs.org>; 'David Janik (david.janik@state.ma.us)'

<riohnston@clarku.edu>; 'Ray Marshall (RMarshall@narrabay.com)'

< RMarshall@narrabay.com>; 'Bill Napolitano (bnap@srpedd.org)' < bnap@srpedd.org>; 'Jared

Rhodes (jared.rhodes@doa.ri.gov)' <jared.rhodes@doa.ri.gov>; hricci@massaudubon.org;

'Nicole E. Rohr Ph. D. (nrohr@mail.uri.edu)' <nrohr@mail.uri.edu>; 'Karla H. Sangrey, P.E.

 $(\underline{KSangrey@ubwpad.org})' < \underline{KSangrey@ubwpad.org} >; Stankelis, Bob (DEM)$ 

 $<\!\!\underline{bob.stankelis@dem.ri.gov}\!\!>; 'jstone@savebay.org' <\!\!\underline{jstone@savebay.org}\!\!>;$ 

ssullivan@neiwpcc.org; 'John Torgan (jtorgan@tnc.org)' < jtorgan@tnc.org>;

Rebecca.Weidman@state.ma.us; 'Nick Wildman (nick.wildman@state.ma.us)'

<nick.wildman@state.ma.us>; Akin, Thomas - NRCS, Amherst, MA

<thomas.akin@ma.usda.gov>; David L. Taylor Ph. D. (dtaylor@rwu.edu) <dtaylor@rwu.edu>;

Lyons, Regina < Lyons.Regina@epa.gov>; David Bidwell (dbidwell@mail.uri.edu)

<<u>dbidwell@mail.uri.edu</u>>; Cantwell, Mark <<u>Cantwell.Mark@epa.gov</u>>; Gleason, Tim

< Gleason. Timothy@epa.gov >; Kimberly Groff, Ph.D. (kimberly.groff@state.ma.us)

< kimberly.groff@state.ma.us>; reza\_hashemi@uri.edu; Paul Mathisen (mathisen@wpi.edu)

<mathisen@wpi.edu>; Candace Oviatt <coviatt@uri.edu>; Warren Prell

(Warren\_Prell@Brown.EDU) < Warren\_Prell@Brown.EDU>; Paula Sturdevant Rees

<rees@acad.umass.edu>; Alicia R. Timme-Laragy, Ph.D. (aliciat@schoolph.umass.edu)

<a href="mailto:<a href="mailt

<jamie.vaudrey@uconn.edu>

Cc: Cote, Mel < Cote.Mel@epa.gov >; Whittle, Caitlyn < Whittle.Caitlyn@epa.gov >; Pryor, Margherita@epa.gov >; Emily Shumchenia (emily.shumchenia@gmail.com)

<emily.shumchenia@gmail.com>; Courtney Schmidt < Courtney.Schmidt@nbep.org>; Eivy

Monroy <eivy.monroy@nbep.org>; Julia Bancroft <Julia.Bancroft@nbep.org>;

```
rfriesner@neiwpcc.org; Heather M. Radcliffe Esq. (hradcliffe@neiwpcc.org)
<hradcliffe@neiwpcc.org>; dan.codiga@gmail.com; Dave Murray <dmurray@brown.edu>;
Kenny Raposa <a href="kenny@nbnerr.org">kenny@nbnerr.org</a>; Jennifer West <a href="jennifer@nbnerr.org">jennifer@nbnerr.org</a>; Tom Kutcher
(tkutcher@savebay.org) <tkutcher@savebay.org>; Rashleigh, Brenda
<Rashleigh.Brenda@epa.gov>; Kuhn, Anne <Kuhn.Anne@epa.gov>; Walker, Henry
<Walker.Henry@epa.gov>; Chintala, Marty <<a href="mailto:Chintala.Marty@epa.gov">Chintala.Marty@epa.gov</a>; Tom Uva
(TUva@narrabay.com) <TUva@narrabay.com>; Deacutis, Christopher (DEM)
<christopher.deacutis@dem.ri.gov>; Scott, Elizabeth (DEM) <elizabeth.scott@dem.ri.gov>;
Caitlin Chaffee <cchaffee@crmc.ri.gov>; Jordan, Paul (DEM) <paul.jordan@dem.ri.gov>; Peter
V. August (pete@edc.uri.edu) <pete@edc.uri.edu>; alan.libby@DEM.RI.GOV;
Katie.DeGoosh@dem.ri.gov; angelo.liberti@dem.ri.gov; joseph.haberek@dem.ri.gov; Heidi
Travers (heidi.travers@dem.ri.gov) < heidi.travers@dem.ri.gov>; eric.schneider@dem.ri.gov;
Sawyer, Gregory (FWE <gregory.sawyer@state.ma.us>; Cicchetti, Giancarlo
< <u>Cicchetti.Giancarlo@epa.gov</u>>; jason.mcnamee@dem.ri.gov; 'Borkman, David (DEM)'
<David.Borkman@dem.ri.gov>; Grear, Jason <Grear.Jason@epa.gov>; Turenne, Jim - NRCS,
Warwick, RI <Jim.Turenne@ri.usda.gov>; Scott Jackson <sjackson@umass.edu>; Jim Tobey
(tobey@crc.uri.edu) <tobey@crc.uri.edu>; Heather Stoffel (stoffel@uri.edu) <stoffel@uri.edu>;
Jane.Peirce@state.ma.us; Swigor, Juliet (DEP < Juliet.Swigor@MassMail.State.MA.US>; Rob
Hudson (robbie.hudson1@gmail.com) < robbie.hudson1@gmail.com>; Rachel Calabro
<rcalabro@savebay.org>; Michael Bradley <michael bradley@uri.edu>; Bob Nuzzo
<robert.nuzzo@state.ma.us>; thamblett@savebay.org; Donald Pryor <depryor98@gmail.com>;
rynearson@uri.edu; Daisy Durant <daisy@nbnerr.org>; Eliza Moore
(eliza.moore@narrabay.com) <eliza.moore@narrabay.com>; Berry, Walter
<Berry.Walter@epa.gov>; Comeau, Christine <ccomeau@narrabay.com>;
david.vallee@noaa.gov; Fulweiler, Robinson W <rwf@bu.edu>; 'Wenley Furgeson'
< WFerguson@SaveBay.org>; Thomas Borden < Tom.Borden@nbep.org>
Subject: The State of Our Watershed
```

Good afternoon members of our Steering Committee, our Science Advisory Committee, and various partners that helped in this effort,

I am very pleased to let you know that we have completed a final draft of *The State of Our Watershed* and an accompanying draft Technical Report.

Many thanks goes out to the vast array of partners that help develop these documents. Please take a look at the acknowledgement section to see how many organizations and individuals contributed to these drafts. We are very grateful and appreciate the support we received in developing these reports from those that provided data, those who shared research results, and those who provided comments on draft documents. Your assistance and suggestions have helped shape these documents.

We are seeking your input to finalize these draft documents as follows:

- 1. For our Steering Committee we ask that you provide comments on *The State of Our Watershed* by October 28<sup>th</sup>
- 2. For our Science Advisory Committee we ask that you provide comments on *The State of Our Watershed Technical Report* as well as *The State of Our Watershed* by October 28<sup>th</sup> (please focus on the sections within your respective subgroups as listed below)

We have created a FTP site because the documents are quite large and this will also allow you to upload and see comments. Attached are FTP site instructions.

After your review and comments we will also provide an opportunity for public review before finalizing these documents.

Here is a quick overview of both documents and how we got here. *The State of Our Watershed* is an 80 page document that is designed to allow the public to examine numerous issues through text, maps, photos, illustrations, and graphics. For those that have been helping with the report, you have not seen most of this document as it is a summary of the technical analysis.

The document is organized by topics:

<u>Chapter 1: People & Places</u> (Beaches, Boating and Swimming, Shellfishing, Open Space, Population, Land Use, Developed Lands, and Wastewater)

<u>Chapter 2: Plants, Animals, & Habitats</u> (**Bay Habitat** including Seagrass, Salt Marsh, and Benthic Habitat; **Streams** including Stream Invertebrates, Freshwater Fish, and Water Quality for Aquatic Life); and **Bay Waters** including Water Quality, Oxygen, Nutrients, Chlorophyll, Water Clarity and Toxins)

<u>Chapter 3: A Changing Climate</u> (**Changes in the Watershed** including Temperature and Precipitation and **Changes in the Bay** (Sea Level and Fish Communities)

The State of Our Watershed summarizes the major findings of the Technical Report so we welcome your thoughts and suggestions on ways to improve the report and to

provide clarity for some of the issues that can be quite complicated. It is important to note that we have budgeted to display these issues using storymaps on our website next year using photos and maps where you can zoom in to your neighborhood. This way we can take the results and provide them in both a static report and more interactive website.

The State of Our Watershed Technical Report is 360 pages of analysis on the issues listed above. Each issue has a separate report where the background, method, and findings of the status and trends are detailed. The development of this report involved a host of meetings since our Request for Input document of September, 2014 scoping out the indicators to examine and our quality assurance project plan in April of 2015. Numerous meetings of the Science Advisory Committee, topical groups of experts, and individual meetings with practitioners allowed us to gather ideas, data, and findings. Draft reports were developed over the past six months and we are grateful for all the suggestions and comments on those drafts. We updated all of the sections and incorporated updated text, tables and figures into this September 2<sup>nd</sup> draft.

For the Science Advisory Committee members and any other that would like to review *The State of Our Watershed Technical Report*, we welcome your comments and suggestions and will update this document through this review process. The Committee's subgroupings are listed here: <a href="Estuarine Waters">Estuarine Waters</a>: Tim Gleason, Reza Hashemi, John King, Susan Kiernan, Candace Oviatt, Warren Prell, Bob Stankelis, Jamie Vaudrey; <a href="Fresh Waters">Fresh Waters</a>: Tim Gleason, Kimberly Groff, Susan Kiernan, Paul Mathisen, Paula Rees; <a href="Watershed Lands">Watershed Lands</a>: Kimberly Groff, Robert Johnston; <a href="Human Health">Human Health</a>: David Bidwell, Mark Cantwell, Robert Johnston, Alicia Timme-Laragy; <a href="Climate Change">Climate Change</a>: David Bidwell, Reza Hashemi, John King, Candace Oviatt, Warren Prell, and Alicia Timme-Laragy.

The State of Our Watershed and the Technical Report are found on the FTP site. Please use the attached instructions. Please let me know if you have any difficulties obtaining the documents.

For your comments, we ask that you either mark up the PDF or provide a word document with comments referencing specific sections. There is a "Comments" folder on the FTP site where you can upload your comments and suggestions.

Lastly, our September 21<sup>st</sup> Steering Committee meeting (10:30 am here at our office in Providence in Room 300) will include a presentation and an opportunity to discuss the

draft report. Science Advisory Committee members are encouraged to attend. Many thanks goes out again for all of your help in developing this report. We look forward to your suggestions and comments and please do not hesitate to ask should you have any questions.

Enjoy the weekend,

Tom

## Thomas A. Borden, Esq.

Program Director

Narragansett Bay Estuary Program - NEIWPCC

235 Promenade Street - Suite 310

Providence, RI 02908

P: 401-633-0552

O: 401-633-0550

F: 401-230-1798

C: 609-955-0395

tom.borden@nbep.org

# NARRAGANSETT BAY ESTUARY PROGRAM

# www.nbep.org

# www.neiwpcc.org



http://water.epa.gov/type/oceb/nep/